

ABSTRACT

A split-frame vehicle in which the front and rear sub-frames may rotate relative to one another along a longitudinal axis that runs generally parallel to the ground. In one embodiment, the vehicle includes a locking mechanism operatively coupled between the front and rear sub-frames. The locking mechanism is operative between a locked position in which the sub-frames are rigidly coupled and an unlocked position in which the sub-frames are free to rotate relative to one another. In a second embodiment, the vehicle includes an axial rotator joint connected between the sub-frames. The joint includes a first bearing plate connected to the front sub-frame and a second bearing plate connected to the second sub-frame. The faces of each bearing plate bear on one another and define the rotational interface between the sub-frames. A drive shaft extends through an opening in the center of each bearing plate. The bearing plates are oriented so that the face of each plate is perpendicular to the longitudinal axis that runs generally parallel to the ground and the drive shaft extends along this longitudinal axis. In a third embodiment, rear steering is incorporated into a split-frame four-wheel drive vehicle.